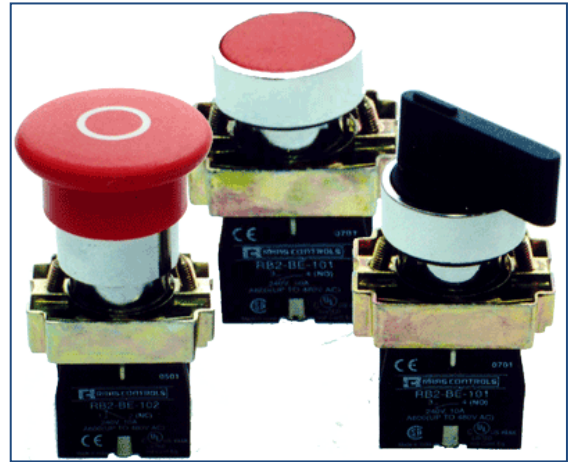# 22.5mm Pushbuttons, Selectors and Indicators

This traditional line of 22.5mm dia. control devices (pushbuttons, selector switches and pilot lights) from ITC was designed to provide safe operation and offer ease of assembly.
The main features include:

- Reduced footprint on the panel surface.
- Self-cleaning contacts.
- Intrinsic grounding of the actuator metal parts.
- Excellent flammability rating.
- Shrouded terminals.
- Robust construction.

The following products are included in this catalog:

- Pushbuttons (illuminated and non-illuminated).
- Lever selector switches (illuminated and non-illuminated).
- Key selector switches.
- Emergency Stop Switches (illuminated or non-illuminated), also known as E-stops or Mushroom pushbuttons.
- Pilot lights.
- Accessories, including nameplates, shrouds, empty pushbutton stations.

In general terms, a non-illuminated device includes an actuator, a mounting collar (or bracket), and a number of NO or NC contacts (1 to max. 6). An illuminated device includes an actuator, a collar equipped with a bulb holder (some models come with a light bulb), and a number of NO or NC contacts (from 1 to max. 4).

Actuators have chrome plated metal bezels. Pre-assembled actuators/collars (brackets) are also available. All devices described in this catalog can be mounted on metal plates 1 to 6 mm thick. Bulb holders accept Ba9s (bayonet) bulbs, voltages up to 220V, with bulb diameter max. 10mm. and max length 28mm. Contacts are double-break type, with self-wiping design. Gold plated contacts for low-voltage applications are also available. Contact elements and bulb holders have shrouded terminals with combined (slot/Philips) screws.

Mounting
Minimum distance between centers of adjacent devices is 30x40mm. However, the actual layout should be defined based on the application and the type of device used (e.g., a 60mm. dia. E-stop requires greater distance between centres, etc…). Actuators and pilot light heads mount on the collar (bracket) with a twist-lock-type fixing requiring no tools. The complete assembly locks into position on the panel by means of two pointed screws (M4) tightened from the rear. These screws should be tightened equally, to the point where they pierce through the paint on the panel, thus ensuring good grounding of the device.

General and technical characteristics:

Approvals	CSA C22-2 No. 14-95, UL508, EN60947 -5/1/2000, VDE 0660
Ingress protection	IP65 as per IEC529, NEMA 4X / 12 as per UL50
Ambient temperature	-25°C to +70°C (operation)
Mechanical life	1,000,000 operations (pushbuttons, selectors) – 300,000 operations (E-stops)
Frequency of operation max.	3600 op/hour
Contact Operation	Slow break, Self wiping (NO or NC). NC with Positive Opening Operation.
Rated thermal current	10A
Rated insulation voltage	500V
Terminal capacity	Min. 1 x 0.5mm^2, max 2 x 1.5mm^2 or 1 x 2.5mm^2
Contact marking	NC: 1-2 NO: 3-4
Contact Electrical Rating	AC15: 24V/4A – 120V/3A – 220V/2A - DC13: 24V/0.5A – 110V/0.2A

ITC
Electrical Components

Non-illuminated Pushbuttons (order by Part No.):

	Spring Return Flush Head Actuator			Spring Return Projecting Head Actuator	
	Part No.			**Part No.**	
Colour	**Actuator only**	**Actuator & mounting collar**	**Colour**	**Actuator only**	**Actuator & mounting collar**
White	RB2-BA1	RB2-BA1-B	White	RB2-BL1	RB2-BL1-B
Black	RB2-BA2	RB2-BA2-B	Black	RB2-BL2	RB2-BL2-B
Green	RB2-BA3	RB2-BA3-B	Green	RB2-BL3	RB2-BL3-B
Red	RB2-BA4	RB2-BA4-B	Red	RB2-BL4	RB2-BL4-B
Yellow	RB2-BA5	RB2-BA5-B	Yellow	RB2-BL5	RB2-BL5-B
Blue	RB2-BA6	RB2-BA6-B	Blue	RB2-BL6	RB2-BL6-B

Information subject to change without notice

Non-illuminated Pushbuttons – Universal Flush Head Actuator with Interchangeable Color Disks –
Flush Head Actuators with Symbols (order by Part No.):

	Spring Return Flush Head Actuator			Spring Return Flush Head Actuators with Symbols		
	Part No.				**Part No.**	
Colour	**Actuator only**	**Actuator & mounting collar**	**Colour**	**Marking**	**Actuator only**	**Actuator & mounting collar**
Universal Actuator	RB2-BA0	RB2-BA0-B	White	N	RB2-BA334	RB2-BA334-B
White Disk	RB2-BA0-1	-	Black	M	RB2-BA335	RB2-BA335-B
Black Disk	RB2-BA0-2	-	Red	STOP	RB2-BA434	RB2-BA434-B
Green Disk	RB2-BA0-3	-	Red	0	RB2-BA432	RB2-BA432-B
Red Disk	RB2-BA0-4	-	Green	I	RB2-BA331	RB2-BA331-B
Yellow Disk	RB2-BA0-5	-	Green	II	RB2-BA336	RB2-BA336-B
Blue Disk	RB2-BA0-6	-	Blue	RESET	RB2-BA666	RB2-BA666-B

Information subject to change without notice

Illuminated Pushbuttons (order by Part No.):

	Illuminated Spring Return Flush Head Actuator			Illuminated Spring Return Projecting Head Actuator	
	Part No.			**Part No.**	
Colour	**Actuator only**	**Actuator & Bulb Holder Ba9s**	**Colour**	**Actuator only**	**Actuator & Bulb Holder Ba9s**
White	RB2-BW31	RB2-BW31-B	White	RB2-BW11	RB2-BW11-B
Green	RB2-BW33	RB2-BW33-B	Green	RB2-BW13	RB2-BW13-B
Red	RB2-BW34	RB2-BW34-B	Red	RB2-BW14	RB2-BW14-B
Amber	RB2-BW35	RB2-BW35-B	Amber	RB2-BW15	RB2-BW15-B
Blue	RB2-BW36	RB2-BW36-B	Blue	RB2-BW16	RB2-BW16-B
Clear	RB2-BW37	RB2-BW37-B	Clear	RB2-BW17	RB2-BW17-B

Information subject to change without notice
Bulb holders are supplied without bulbs

Non-illuminated Selector Switches (order by Part No.):

Selector Actuator w/Standard Arm (Black)		
	Part No.	
Action	**Actuator only**	**Actuator & mounting collar**
2 Pos. Maintained	RB2-BD2	RB2-BD2-B
2 Pos. Spring Ret. To Left	RB2-BDR2	RB2-BDR2-B
3 Pos. Maintained	RB2-BD3	RB2-BD3-B
3 Pos. Spring Ret. To Centre	RB2-BDR3	RB2-BDR3-B

Selector Actuator w/Extended Arm (Black)		
	Part No.	
Action	**Actuator only**	**Actuator & mounting collar**
2 Pos. Maintained	RB2-BJ2	RB2-BJ2-B
2 Pos. Spring Ret. To Left	RB2-BJR2	RB2-BJR2-B
3 Pos. Maintained	RB2-BJ3	RB2-BJ3-B
3 Pos. Spring Ret. To Centre	RB2-BJR3	RB2-BJR3-B

Information subject to change without notice

Illuminated Selector Switches (order by Part No.):

2-Position Illuminated Selector Actuator			
		Part No.	
Action	**Colour**	**Actuator only**	**Actuator & Bulb Holder Ba9s**
2 Pos. Maintained	Green	RB2-BK123	RB2-BK123-B
	Red	RB2-BK124	RB2-BK124-B
	Amber	RB2-BK125	RB2-BK125-B
	Blue	RB2-BK126	RB2-BK126-B
2 Pos. Spring Ret. To Left	Green	RB2-BK143	RB2-BK143-B
	Red	RB2-BK144	RB2-BK144-B
	Amber	RB2-BK145	RB2-BK145-B
	Blue	RB2-BK146	RB2-BK146-B

3-Position Illuminated Selector Actuator			
		Part No.	
Action	**Colour**	**Actuator only**	**Actuator & Bulb Holder Ba9s**
3 Pos. Maintained	Green	RB2-BK133	RB2-BK133-B
	Red	RB2-BK134	RB2-BK134-B
	Amber	RB2-BK135	RB2-BK135-B
	Blue	RB2-BK136	RB2-BK136-B
3 Pos. Spring Ret. To Centre	Green	RB2-BK153	RB2-BK153-B
	Red	RB2-BK154	RB2-BK154-B
	Amber	RB2-BK155	RB2-BK155-B
	Blue	RB2-BK156	RB2-BK156-B

Information subject to change without notice

Key Selector Switches (order by Part No.):

Key Selector Switches - 2 positions			
		Part No.	
Action	**Key Removal**	**Actuator only**	**Actuator & mounting collar**
Maintained	Left	RB2-BG2	RB2-BG2-B
	Right	RB2-BG02	RB2-BG02-B
	All Pos.	RB2-BG4	RB2-BG4-B
Spring ret. To Left	Left	RB2-BG6	RB2-BG6-B

Key Selector Switches - 3 positions			
		Part No.	
Action	**Key Removal**	**Actuator only**	**Actuator & mounting collar**
Maintained	Left	RB2-BG9	RB2-BG9-B
	Right	RB2-BG09	RB2-BG09-B
	All Pos.	RB2-BG0	RB2-BG0-B
	Centre	RB2-BG3	RB2-BG3-B
	L & R	RB2-BG5	RB2-BG5-B
Spring Ret. To Centre	Centre	RB2-BG7	RB2-BG7-B
Maint. L & C Spring Ret. To C	Centre	RB2-BG8	RB2-BG8-B

Note: Standard key N. 455 – Other keys upon request. Information subject to change without notice